of the cellular industry may have been influenced by a variety of factors that might not today affect the PCS industry in the same manner. As the Commission notes, nearly all of the wireline cellular licenses were allocated to large regional telephone companies, i.e., to the Bell Operating Companies and GTE. Notice ¶ 56. From the outset, cellular service was envisioned primarily as service for customers travelling in automobiles, a service that implies the need for relatively large service areas, and has resulted in a relatively expensive, high-function service.

The new PCS licenses, in contrast, will not in the Commission's proposal be set aside for companies with a specific regional base. Many observers expect PCS to be a "more local" service than cellular, potentially geared to pedestrian portability rather than high-speed automobile use. Generally, the addition of more competitors to wireless markets may also encourage providers to seek out niche markets with differentiated products, for which the efficient service area size might be either larger or smaller than efficient cellular service areas. Cf. DOJ/FTC Horizontal Merger Guidelines § 1.2 (1992) ("Merger Guidelines") (geographic markets are product-market specific and are driven by customer search patterns for specific products). Continued advances in technology can also be expected to affect the nature of services that are offered in unpredictable ways. For these reasons, even though we agree that experience in the cellular industry should be examined carefully, we do not have a high degree of certainty

that the cellular experience will be a reliable guide to the development of PCS markets.

The "efficient size" of a PCS firm may vary over time, by area, by service provided, or by technologies used to provide those services. In view of the difficulty in predicting at such an early stage of PCS technology the likely efficient size of PCS service areas, license areas should be established in the way that will best permit the market to adjust to achieve efficient service areas. If the license areas established by the Commission are too small to realize economies of scale, market forces may produce consolidations that rectify the situation. While market forces similarly could lead to voluntary sales of unwanted portions of license territories if the licenses are too large, we are not aware of such situations. 22

Moreover, if license areas are too large, a significant number of firms may be unnecessarily excluded from the PCS market. Firms that might have the capital, facilities (e.g., a cable television network or fiber transmission facilities with unused capacity), expertise, or consumer confidence to be the most efficient competitors in a local market may lack the ability to compete effectively across a larger area.

<sup>22</sup> If the Commission does not permit a licensee to divest portions of its service area, the licensee cannot reach what it perceives to be a more efficient scale. If deconsolidation is restricted, licensing by smaller regions will leave licensees more able to adjust to efficient size.

Two other practical considerations tend to favor the use of MSAs and RSAs as license areas:

First, as discussed below (pp. 23-29), the Department believes that cellular operators should be allowed to expand their systems by acquiring out-of-region PCS licenses, but does not believe they (or anyone else) should be allowed to acquire additional licenses within their current license areas at this stage of PCS development. The cellular operators have ten years of experience to bring to these markets, and should be allowed to participate in out-of-region PCS licenses. MSAs and RSAs "fit" with the existing cellular map, making it simple for cellular incumbents to acquire out-of-region PCS licenses. Using MSAs and RSAs, subject to this restriction, would avoid difficult questions of whether cellular incumbents should be allowed to acquire a PCS license where they hold part of a cellular license, or in which there is a small overlap. But the size of the license area would be critical. For example, under the limit proposed, a cellular operator in Las Vegas could acquire a PCS license in the San Diego MSA, but could not acquire a PCS license for the MTA that covers San Diego (the Los Angeles MTA), which includes Las Vegas. Several potential PCS licensees might be eliminated from PCS competition (including competition with incumbent cellular operators) by broader licenses areas.

Second, granting licenses for smaller areas may make it more likely that less populated areas will be provided service and that niche markets will be developed. If the Commission issues larger licenses, and does not substitute fiat for

market-based decisionmaking by imposing build-out requirements, there is no guarantee that the acquiror of, e.g., the New York MTA will develop PCS services in medium or smaller communities in the area, e.g., Syracuse, New York, or Burlington, Vermont (both of which are within the New York MTA), as quickly as would a party that sought a smaller license restricted to those areas. 23

On the basis of these considerations, our preliminary view is that the Commission should consider using MSAs and RSAs as the basis for license areas, unless it develops substantial confidence that BTAs or MTAs are likely to constitute the most efficient service areas for PCS services.

### E. Ownership of multiple licenses

The Commission has also requested comment on whether it should limit the total spectrum held by any one PCS licensee, either by limiting operators to a single license or by capping the total amount of spectrum that a licensee could acquire or use. Notice ¶ 81. The Department believes that, under the Commission's proposals regarding the amount of spectrum to be allocated to PCS and to each PCS licensee, a temporary limitation on the acquisition of multiple PCS licenses or common

<sup>23</sup> It is certainly possible that market demand may not justify immediate construction of additional mobile systems in some less populated areas. However, the existence of the additional licenses provides an avenue for additional entry into PCS at a later date -- and possibly at a lower cost, as the technology matures.

ownership of cellular and PCS licenses in the same geographic area would be appropriate. 24

We believe that under most circumstances, it would be unwise to adopt a general prohibition against a class of potential mergers or acquisitions, because many mergers enhance efficiency and are thus procompetitive. Such blanket rules prevent case by case consideration of particular transactions. In this case, however, special circumstances exist that may justify a temporary general prohibition on acquisition within a geographic area. The markets are likely to be characterized by sufficiently high concentration and entry barriers that mergers could have significant anticompetitive effects. The potential lost efficiencies from a general prohibitory rule is reduced by the fact that the Commission has determined that the spectrum allocated to each licensee is sufficiently large to allow it to operate efficiently, at least in the near term.

There are now only two mobile telecommunications systems providing cellular mobile services in any area. 25 If the Commission issues three PCS licenses in each market, as it has proposed, the markets for mobile services eventually may be

<sup>24</sup> As indicated at pp. 21-22 above, the Department strongly believes that the Commission should not prevent licensees from acquiring licenses or rights to use spectrum in more than one geographic area. Our comments here are limited to the issue of acquisitions of multiple licenses within the same license area.

<sup>25</sup> It is possible that firms using frequencies assigned to SMR will offer services that may compete with services offered by cellular or PCS licensees. At this time, however, the ability of firms using SMR frequencies to compete effectively has not been demonstrated.

served by at most five competing mobile systems. 26 Under this assumption, a five-firm market is still a highly concentrated market, in which the lowest possible HHI (assuming that all five firms have equal market shares) would be 2000. 27 While concentration alone is not a sufficient indication of the competitive condition in a market, it provides a useful starting place for analysis.

There are several possible measures of market share and concentration in this market, including historical revenues, historical minutes of use, and capacity. Expected capacity is probably the most useful predictor of the long-term future competitive significance of a PCS licensee, but it should be recognized that expected capacity will overstate the licensee's current competitive importance during the time prior to its effective entry into the market. See Merger Guidelines § 1.41. The amount of spectrum allocated to a licensee is probably a useful, though imperfect, proxy for the expected capacity of PCS systems that have not yet been designed and built. For purposes of assessing concentration prior to the effective entry of new licensees, measuring market shares on the basis of the historical revenues or minutes of use of incumbent firms will more accurately reflect their competitive significance.

<sup>26</sup> Once the Commission has determined the appropriate amount of spectrum to allocate to PCS licenses, it should allow some time to elapse to determine whether its judgment appears correct. This is a new industry, and it cannot yet be said that customer demand and available spectrum are insufficient to support, e.g., five competitors. Only by giving the competitive scheme a chance to work can the Commission determine whether it will work. Allowing early consolidations (and the resulting loss of competitors) will only frustrate this attempt.

The Department of Justice and the Federal Trade Commission measure market concentration using the Herfindahl-Hirschman Index, which is calculated by summing the squared market shares of the firms in the market. Assuming that both firms in a two-firm market have equal market shares (the assumption that produces the lowest possible level of concentration), the HHI for that market is 5000. Five equal firms result in an HHI of 2000. For purposes of merger analysis, the Department and the FTC regard markets with an HHI above 1800 as highly concentrated. Mergers producing an increase of more than 50 HHI points in highly concentrated markets (or resulting in highly concentrated markets) potentially raise significant competitive concerns. Merger Guidelines § 1.51.

Even with five firms, this lowest possible level of concentration (measured by sales or in-use capacity) is unlikely to be realized immediately upon licensing. First, PCS licensees will need time to design and build their PCS systems, and still more time to achieve the degree of consumer acceptance needed to compete effectively with -- and thereby constrain the prices of -- the incumbent cellular firms. Second, it is not at all clear whether all mobile service licensees will choose to offer services that are closely comparable to the services offered by their potential competitors, or whether they will target different consumer needs. As indicated above, we believe consumers will benefit if licensees are given the freedom to develop new and different product offerings. However, to the extent that firms do so, the resulting differentiated markets necessarily will be more highly concentrated. See Merger Guidelines § 2.21.

A merger that reduces the number of competitors in a market from five to four could, under some circumstances, increase the potential for coordinated interaction among the remaining competitors by making such interaction more likely, more successful, or more complete. See Merger Guidelines § 2.1. Since these markets have not yet emerged fully and can be expected to change substantially in the coming years, it is difficult at this time to predict precisely how such coordinated interaction would occur or how completely competition might be restricted. The same is true with respect to the risk that a merger in a highly concentrated market would facilitate anticompetitive unilateral price increases. See Merger

Guidelines § 2.22. The potential anticompetitive effects of high market concentration might not, in this case, be ameliorated by the possibility of new entry, given regulatory and spectrum limitations. 28

Even if the analysis of concentration, competitive effects, and entry, as outlined above, suggests that an acquisition might be anticompetitive, the Department would still permit that acquisition if it was reasonably necessary to achieve significant net efficiencies, and if those efficiencies could not reasonably be achieved through other means. Merger Guidelines § 4. It is certainly possible that mobile telecommunications markets might develop in such a manner that acquisitions of multiple licenses or additional spectrum rights could produce efficiencies. However, to the extent that the Commission's decisions concerning the amount of spectrum to be

<sup>28</sup> Even if the Commission anticipated that additional spectrum would be made available for mobile communications services, entry is not likely to be sufficiently rapid, and may not be sufficiently likely, to prevent substantial anticompetitive effects. The Department of Justice regards entry as sufficiently timely to ameliorate anticompetitive effects only if it can be achieved within two years from initial planning to significant market impact. See Merger Guidelines § 3.2. In the mobile communications market, more than two years is likely to be needed to design and build a PCS system and to win the degree of consumer acceptance needed for effective entry.

Entry must also be likely if it is to prevent anticompetitive pricing. This requires, among other things, sufficient sales opportunities available to the entrant for the entrant to achieve a minimum viable scale. See Merger Guidelines § 3.3. Given the uncertainty about the market conditions that may exist at the time, there is no reason to assume that a potential entrant into a PCS market could achieve a minimum viable scale, and therefore no reason to assume that entry would occur to ensure competitive market behavior.

awarded in a single license reflect a determination that the initially granted amount of spectrum is adequate to establish an efficient and effective competitor, that determination implies a judgment that under current conditions, additional spectrum rights beyond those granted in a single license are not reasonably necessary to achieve efficiencies.

In sum, the Department's analysis suggests that acquisitions of multiple PCS and cellular licenses in the same geographic areas may substantially increase concentration in markets that are already highly concentrated and difficult to enter, in a context in which the Commission has determined (either explicitly or implicitly through its spectrum allocation decisions) that the acquiring firm does not need additional spectrum in order to compete effectively and efficiently in the mobile telecommunications market. In these circumstances, such acquisitions could retard the emergence of diversified and competitive market for mobile telecommunications services, and the adoption of a temporary rule prohibiting such acquisitions would be reasonable.

If it chooses to adopt such a rule, however, the rule should be explicitly grounded on the need to ensure that the nascent businesses have an opportunity to develop in a competitive environment, and the Commission should commit itself to a reexamination of this and related issues after some reasonable period of time in light of the technological changes taking place, e.g., four years from licensing. Such a commitment is necessary because the Commission's (or anybody's) ability to foresee how the mobile telecommunications industry

will develop, or relate to other forms of telephony, is inherently imperfect. Today's forecasts of technological development and consumer demand will almost certainly prove Consequently, the quantity of spectrum needed for erroneous. the mobile telecommunications industry as a whole, and for individual firms within that industry, eventually may prove to be substantially less or substantially greater than now appears. If too little spectrum is allocated to PCS, licensees may be unable to provide services that consumers would value, or may provide those services only at an unnecessarily high price. If demand is less than foreseen, the market may not support five licensees. These demand issues may differ market by market. For that reason, we believe that after an initial developmental period, the Commission should consider whether its regulatory policies -- including spectrum allocation decisions -- are preventing the market from evolving towards an efficient market structure.

# F. Eligibility of LECs and Cellular Licensees

As noted previously, the Department is not aware of any technological, economic or regulatory limitations that would prevent cellular licensees from offering services substantially similar to the services offered by PCS licensees, or vice versa. In light of that understanding, and the analysis above indicating that a single firm should not be permitted to acquire more than one license within a given license area, we believe that the FCC should not at this time permit any firm to control both a cellular and a PCS license in the same geographic area. That restriction, which should be reexamined in a

definite time period (e.g., four years), we believe, should apply equally to both wireline and non-wireline cellular licensees.

In some markets, the local exchange carrier ("LEC") does not have a license to provide cellular service. We recommend that in such markets, the local exchange carrier be permitted to acquire one license (either PCS or cellular) to provide mobile communications services, subject to the interconnection requirements discussed below. Under some circumstances, allowing regulated firms that control a bottleneck to enter businesses dependent on access to the bottleneck may raise competitive risks. The Commission, however, has determined that its antidiscrimination rules are sufficient to allow LEC entry into local cellular services. In light of the Commission's decision to permit LECs to operate cellular systems in their local exchange service areas, we see no sound distinction for prohibiting LECs from acquiring a PCS license in areas where they are not currently authorized to provide cellular service, subject to prophylactic regulation. We do not believe, however, that local exchange carriers should be accorded preferential treatment affecting either their ability to acquire a license or the amount of spectrum they may obtain. Therefore, the Department does not believe that the Commission should allow LECs to acquire additional spectrum in areas in which their affiliates hold 25 MHz cellular licenses.

### G. <u>Interconnection</u>

The Department supports the Commission's proposals to confirm explicitly that PCS licensees have a federally protected

right to interconnection with the local exchange, and to require interconnection that is reasonable for the particular PCS system and no less favorable than the interconnection offered by a LEC to another customer or carrier. Notice ¶¶ 99, 101. We also agree with the Commission's observation that the types of interconnection likely to be needed are very difficult to predict at this time, given the uncertainty about the nature of the services that PCS licensees may provide and the technology they will use. Notice ¶ 100.

However, consistent with the recognized importance of interconnection arrangements -- including both the technical aspects of interconnection and the rates to be charged -- we urge the Commission to assess carefully the arguments of other commenters who identify specific interconnection needs. As the Commission has recognized, wireless communications services offer the possibility of competition in markets that have heretofore been served by monopoly local exchange carriers. The development of such competition, like the development of competition in interexchange and alternative access markets, is likely to require reasonable interconnection arrangements.

Appropriate interconnection requirements are crucial if PCS is to evolve efficiently. However, in view of the nascent state of PCS technology, the Commission should not now attempt to set forth the specific rules that might be necessary for efficient interconnection (beyond the general rule proposed in the Notice). Rather, PCS licenses should be issued promptly without waiting for all interconnection matters to be resolved.

We recognize that making licenses available without resolving all issues pertaining to interconnection arrangements might result in subsequent inefficiencies. If licenses are immediately issued, and are auctioned or freely marketable, the licenses will be relatively more valuable to, and relatively more likely to be acquired by, those firms that have the same interconnection needs as existing cellular carriers. 29 Because of their greater interconnection uncertainty, firms with different interconnection needs would be relatively less likely to acquire licenses and build PCS systems.

Nonetheless, there are two reasons why early licensing is preferable to delaying licensing pending a comprehensive rulemaking on interconnection. First, licensing delay would preserve for a greater amount of time the existing cellular duopoly; cellular companies with existing rights to interconnect could build out their wireless systems in a preemptive manner that might limit future competitor size or discourage entry.

Second, if licensing precedes rulemaking on interconnection, the Commission will have more information from more of the actual players in the market; under such circumstances, a more focused discussion and resolution of particular siting and pricing matters could be expected.

<sup>29</sup> Cellular carriers now interconnect with the LECs through trunks that join mobile telephone switching offices and LEC central offices. Other architectures may be appropriate for some wireless services or providers. These providers may seek to interconnect at other sites in the LEC network.

## H. Technical Standards.

As the Commission recognizes, PCS requires "a technical framework that will permit significant flexibility in the design and implementation of PCS systems, devices and services."

Notice ¶ 105. The Department believes that the Commission should consider carefully the purported reasons for particular technical standards, and should attempt to avoid adopting any mandatory standards that will tend to limit PCS licensees in their technology choices or service offerings.

By contrast, alternate standards, particularly for common air interfaces, should be permitted. Indeed, the Commission should encourage the development of private industry standards that facilitate the development of radio telecommunications services in the 1.8 GHz band.

# I. Method of Distributing Licenses

The Commission requests comment on whether licenses should be distributed by auction, by lottery, or by comparative hearing. Notice ¶¶ 82-92. The Department continues to believe that auctions are the best method for assuring that the licenses go to those who are most likely to maximize their value — to a firm willing to put its money where its mouth is.30 The benefits to the Treasury (i.e., the taxpayers) also should not be overlooked. The Department therefore supports the

<sup>30</sup> See Comments of the U.S. Dept. of Justice, <u>In re</u>
Comprehensive Policy Review of Use and Management of the Radio
Frequency Spectrum, at 6-9 (N.T.I.A., filed, Feb. 23, 1990).

Commission's efforts to obtain Congressional authority for auctions.

If, however, auction authority is not swiftly forthcoming, the postcard lottery appears to us to be the next best solution. The simpler the lottery, the more random the distribution of licenses. In any event, a secondary market should be permitted so that the secondary market can then direct the licenses to firms most interested in developing them.

### III. CONCLUSION

The Commission's Notice of Proposed Rulemaking generally recognizes the need that PCS be licensed in a manner most likely to lead to a competitive market structure. In the Department's view, based on the information available at this date, that objective suggests that the Commission should offer as many licenses within each geographic service area as it appears can be efficiently created out of the amount of spectrum to be allocated; that relatively smaller, rather than relatively larger, geographic service areas should be licensed; that, for the near future, firms not be allowed to hold two PCS or cellular licenses in overlapping service areas; that LECs that do not hold cellular licenses in a particular service area be permitted to acquire a PCS license; that the Commission require that LECs offer PCS licensees reasonable and nondiscriminatory interconnection; that licenses be distributed by auction or, if auction is not authorized, by postcard lottery; and that, if these steps are taken, the PCS licensees should be left to choose the technologies and product offerings that seem most likely to find customers in a competitive market.

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